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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LEUNG, JENNIFER A	
ART UNIT	PAPER NUMBER
1764	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/560,469	FERNANDO ET AL.	
	Examiner	Art Unit	
	Jennifer A. Leung	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-13,16-27,41-44 and 47-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-13,16-27,41-44 and 47-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Jennifer A. Leung 9/20/2007

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7-17-07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 17, 2007 has been entered.

Response to Amendment

2. Applicant's amendment submitted on July 17, 2007 has been received and carefully considered. Claims 3, 4, 14, 15, 28-40, 45 and 46 are cancelled. Claims 1, 2, 5-13, 16-27, 41-44 and 47-57 are under consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 5, 6, 8-13, 16, 17, 19-27, 47-50 and 52-57 are rejected under 35 U.S.C. 103(a) as obvious over Robinson et al. (US 5,580,532) in view of Myles (US 4,240,833).

Regarding claims 1, 8, 9, 12, 19-25, 47, 52, 53, 56 and 57, Robinson et al. (see FIG. 1; column 4, line 55 to column 7, line 40) discloses a device **10** comprising:

a housing **12** having an inlet **14** at one end and an outlet (not shown) at an opposite end through which exhaust gases flow; a fragile structure (i.e., monolith **18**) resiliently mounted within said housing, said fragile structure having an outer surface and an inlet end surface at one end in communication with said inlet **14** and an outlet end surface at an opposite end in communication with said outlet; and a support element (i.e., a mounting mat **20**) disposed between the housing **12** and the fragile structure **18**, said support element **20** comprising an integral, substantially non-expanding ply of polycrystalline ceramic fibers comprising about 40 weight percent to about 60 weight percent alumina and about 60 weight percent to about 40 weight percent silica (see column 5, lines 33-64).

The apparatus of Robinson et al. is the same as the instantly claimed apparatus, except that Robinson et al. is silent as to the support element **20** being made from ceramic fibers having the physical properties of fibers that are formed according to the instantly claimed time-temperature heating regimen.

Myles teaches a ceramic fiber, suitable for forming a fiber blanket or mat to be used in a high temperature apparatus (see column 3, line 65 to column 4, line 10), wherein said ceramic fiber is melt-formed and comprises about 40 wt.% to about 60 wt.% alumina and about 60 wt.% to about 40 wt.% silica (see column 2, lines 36-40). In particular, the ceramic fiber is prepared according to a time-temperature regimen of heating said fibers to a temperature of 990°C to at

least 1050°C for greater than 1 hour, or heating said fibers to a sufficient temperature above the devitrification temperature of the fiber material for an effective amount of time to produce a microcrystalline fiber (see column 3, lines 12-64).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the heat treated, melt formed ceramic fibers as taught by Myles for the ceramic fibers present in the support element **20** in the apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the ceramic fibers of Myles retain sufficient flexibility and show dramatically less shrinkage under high temperature use (see column 6, lines 4-11). Furthermore, the substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958), and when the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result, *KSR International Co. v. Teleflex Inc.*, 550 U.S. --, 82 USPQ2d 1385 (2007).

Depending on the selected time-temperature parameters and fiber dimensions, the heat treated fibers will inherently possess a crystallite size of about 50 Å to about 500 Å (see Myles: column 2, lines 13-17 and 50-53). Although Myles is silent as to the crystallinity of the fibers being from about 5 to about 50 percent, the time-temperature heating regimen as taught by Myles is the same as or substantially the same as the time-temperature heating regimen disclosed by Applicants, and, as such, the ceramic fibers of Myles will be the same as or substantially the same as the instantly claimed fibers having crystallinity values from about 5 to 50 percent.

And, if not already inherent therein, it would have been further obvious for one of ordinary skill in the art at the time the invention was made to select the appropriate time and temperature parameters for producing a ceramic fiber having the instantly claimed physical properties of crystallinity and crystallite size in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the specific crystallinity and crystallite size are not considered to confer patentability to the claim since the precise crystallinity and crystallite size would have been considered a result effective variable by one having ordinary skill in the art. Accordingly, one having ordinary skill in the art would have routinely optimized the heating time and temperature ranges for producing a suitable crystallinity and crystallite size in the polycrystalline ceramic fibers, to obtain the desired flexibility and shrink resistance, for instance, in the support element/mat for holding the fragile structure in Robinson et al., *In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980), and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Because the modified apparatus of Robinson et al. comprises all of the instantly claimed components, the support element will inherently exhibit the specified minimum residual pressures for holding the fragile structure within the housing after 200 cycles of testing at 900 °C or after 1000 cycles of testing at 750 °C.

Regarding claims 2, 13 and 48, Robinson et al. further discloses that the fragile structure **18** has a perimeter, at least a portion of which is integrally wrapped by the support element **20** (see FIG. 1; column 9, lines 26-30).

Regarding claims 5, 6, 16, 17, 49 and 50, Myles further teaches that the ceramic fibers have an average diameter ranging from about 1 micron to about 14 microns, or from about 3 microns to about 6.5 microns (see column 2, lines 50-53).

Regarding claims 10, 11, 26, 27, 54 and 55, Robinson et al. further discloses that the exhaust gas treatment device may comprise a catalytic converter or a diesel particulate trap (see column 4 lines 55-62).

4. Claims 7, 18, 41-44 and 51 are rejected under 35 U.S.C. 103(a) as obvious over Robinson et al. (US 5,580,532) in view of Myles (US 4,240,833), as applied to claims 1, 9, 12 and 21, and further in view of Sasaki et al. (JP 07-286514).

Regarding claims 7, 18 and 51, Robinson discloses that the ceramic fibers should be substantially shot free, e.g., on the order of about 5 percent nominally or less (see column 5, line 65 to column 6, line 1). Sasaki et al. also teaches a ceramic fiber having a shot content of 5% by weight or less (see section [0007]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to maintain a shot content of less than about 10% in the ceramic fibers forming the support element/mat in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because when larger amounts of shot are present in the ceramic fiber, the specific gravity of portions of the support element/mat increases, and thermal conductivity becomes uneven, resulting in an inability to evenly hold the fragile structure, as taught by Sasaki et al.

Regarding claims 41-44, the collective teaching of Robinson and Myles is silent as to the support element/mat being needled. Sasaki teaches a support element/mat comprising ceramic fibers, in which said support element/mat is needled (see sections [0008], [0009]). It would have

been obvious for one of ordinary skill in the art at the time the invention was made to provide needling to the support element/mat in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the needling orients some of the ceramic fibers in the vertical direction to tightly bind the support element/mat, so that the bulk density of the support element/mat is increased and separation or shifting of the layers of the support element/mat can be prevented, as taught by Sasaki et al.

5. Claims 1, 2, 5, 6, 8-13, 16, 17, 19-27, 47-50 and 52-57 are rejected under 35 U.S.C. 103(a) as obvious over Robinson et al. (US 5,580,532) in view of Johnson et al. (GB 1 481 133).

Regarding claims 1, 8, 9, 12, 19-25, 47, 52, 53, 56 and 57, Robinson et al. (see FIG. 1; column 4, line 55 to column 7, line 40) discloses a device **10** comprising:

a housing **12** having an inlet **14** at one end and an outlet (not shown) at an opposite end through which exhaust gases flow; a fragile structure (i.e., monolith **18**) resiliently mounted within said housing, said fragile structure having an outer surface and an inlet end surface at one end in communication with said inlet **14** and an outlet end surface at an opposite end in communication with said outlet; and a support element (i.e., a mounting mat **20**) disposed between the housing **12** and the structure **18**, said support element **20** comprising an integral, substantially non-expanding ply of polycrystalline ceramic fibers comprising about 40 wt.% to about 60 wt.% alumina and about 60 wt.% to about 40 wt.% silica (see column 5, lines 33-64).

The apparatus of Robinson et al. is the same as the instantly claimed apparatus, except that Robinson et al. is silent as to the support element **20** being made from ceramic fibers having the physical properties of fibers that are formed according to the instantly claimed time-

temperature heating regimen.

Johnson et al. (generally, page 2, line 14 to page 3, line 59) teaches a polycrystalline ceramic fiber, used in a refractory fiber blanket, wherein said fiber comprises about 40 wt.% to about 60 wt.% alumina and about 60 wt.% to about 40 wt.% silica (e.g., 45% alumina/52% silica in Kaowool™ fiber; see page 2, lines 32-41). In particular, the ceramic fibers are subjected to a process of heating at a sufficient temperature above its devitrification temperature for an effective amount of time, with "... the heat treatment being terminated subsequent to formation of the fine-grained crystalline product but prior to the onset of excessive grain growth," (see page 1, lines 67-81). Such fibers have an average crystallite size of less than 200 angstroms (see page 2, lines 85-89).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to substitute the heat treated ceramic fibers as taught by Johnson et al. for the ceramic fibers present in the support element **20** in the apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the ceramic fibers of Johnson et al. have an improved ability to resist a permanent set or deformation when used at elevated temperatures below the devitrification temperature, and, upon compression, returns to at least 85% to 90% of its original dimension when the compression force is released (see page 3 lines 47-59). Furthermore, the substitution of known equivalent structures involves only ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958), and when the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable

result, *KSR International Co. v. Teleflex Inc.*, 550 U.S. --, 82 USPQ2d 1385 (2007).

Although Johnson et al. is silent as to the crystallinity of the fibers being from about 5 to about 50 percent, the time-temperature heating regimen as taught by Johnson et al. is the same as or substantially the same as the time-temperature heating regimen disclosed by Applicants, and, as such, the ceramic fibers of Johnson et al. will be the same as or substantially the same as the instantly claimed fibers having crystallinity values from about 5 to 50 percent.

And, if not already inherent therein, it would have been further obvious for one of ordinary skill in the art at the time the invention was made to select the appropriate time and temperature parameters for producing a ceramic fiber having the instantly claimed physical properties of crystallinity and crystallite size in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the specific crystallinity and crystallite size are not considered to confer patentability to the claim since the precise crystallinity and crystallite size would have been considered a result effective variable by one having ordinary skill in the art. Accordingly, one having ordinary skill in the art would have routinely optimized the heating time and temperature ranges for producing a suitable crystallinity and crystallite size in the polycrystalline ceramic fibers to obtain the desired resiliency in the support element/mat for holding the fragile structure in Robinson et al., *In re Boesch*, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980), and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Because the modified apparatus of Robinson et al. comprises all of the instantly claimed components, the support element will inherently exhibit the specified minimum residual

pressures for holding the fragile structure within the housing after 200 cycles of testing at 900 °C or after 1000 cycles of testing at 750 °C.

Regarding claims 2, 13 and 48, Robinson et al. further discloses that the fragile structure **18** has a perimeter, at least a portion of which is integrally wrapped by the support element **20** (see FIG. 1; column 9, lines 26-30).

Regarding claims 5, 6, 16, 17, 49 and 50, Johnson et al. further teaches that the ceramic fibers generally have an average diameter ranging from about 1 micron to about 14 microns, or from about 3 microns to about 6.5 microns (see page 1, lines 29-34).

Regarding claims 10, 11, 26, 27, 54 and 55, Robinson et al. further discloses that the exhaust gas treatment device may comprise a catalytic converter or a diesel particulate trap (see column 4 lines 55-62).

6. Claims 7, 18, 41-44 and 51 are rejected under 35 U.S.C. 103(a) as obvious over Robinson et al. (US 5,580,532) in view of Johnson et al. (GB 1 481 133), as applied to claims 1, 9, 12 and 21, and further in view of Sasaki et al. (JP 07-286514).

Regarding claims 7, 18 and 51, Robinson discloses that the ceramic fibers should be substantially shot free, e.g., on the order of about 5 percent nominally or less (see column 5, line 65 to column 6, line 1). Sasaki et al. also teaches a ceramic fiber having a shot content of 5% by weight or less (see section [0007]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to maintain a shot content of less than about 10% in the ceramic fibers forming the support element/mat in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because when larger amounts of shot are present in the ceramic fiber, the specific gravity of

portions of the support element/mat increases, and thermal conductivity becomes uneven, resulting in an inability to evenly hold the fragile structure, as taught by Sasaki et al.

Regarding claims 41-44, the collective teaching of Robinson and Johnson et al. is silent as to the support element/mat being needled. Sasaki teaches a support element/mat comprising ceramic fibers, in which said support element/mat is needled (see sections [0008], [0009]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to provide needling to the support element/mat in the modified apparatus of Robinson et al., on the basis of suitability for the intended use and absent a showing of unexpected results thereof, because the needling orients some of the ceramic fibers in the vertical direction to tightly bind the support element/mat, so that the bulk density of the support element/mat is increased and separation or shifting of the layers of the support element/mat can be prevented, as taught by Sasaki et al.

Response to Arguments

7. Applicant's arguments filed on July 17, 2007 with respect to the combination of Robinson et al. and Johnson et al. have been fully considered but they are not persuasive.

On page 13 (last paragraph) of the response, Applicant argues,

> "... GB '133 does not disclose, suggest, or provide motivation to utilize ceramic fibers in a mounting mat for exhaust gas treatment devices, such as catalytic converters and diesel particulate traps. Because GB '133 does not disclose or suggest a mounting mat for catalytic converters, it logically follows that is no teaching or disclosure that the fibers of GB '133 exert any minimum holding pressures. GB '133 is limited to fluffy thermal insulation blankets for refractory furnace insulation. As described in the previously submitted Declaration of Joseph A. Fernando, the differences in thickness, density, shot content, the insulation blanket described in GB '133 simply would not

> provide the requisite holding pressure to maintain the fragile catalyst support structure in place within the housing of the exhaust gas treatment device during the rigorous operating conditions of the exhaust gas treatment device. Thus, the teaching to incorporate a mounting mat of ceramic fibers having certain percent crystallinity and crystallite size into an exhaust gas treatment device to provide requisite holding forces is derived only from the present application, and that the combination of GB '133 and US '532 is a result of improper hindsight analysis."

The Examiner respectfully disagrees.

Although GB '133 may not specifically state that the ceramic fiber blanket is to be used as a mounting mat for exhaust gas treatment devices, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention, *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, both Johnson et al. and Robinson et al. are similarly concerned with the particular problem of providing a flexible, stable and resilient ceramic fiber material for use under high-temperature applications.

Furthermore, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. One must ask whether the improvement is more than the predictable use of prior art elements according to their established functions, *KSR International Co. v. Teleflex Inc.*, 550 U.S. --, 82 USPQ2d 1385 (2007). One having ordinary skill in the art would have recognized that the improved ability of the ceramic fibers to resist a permanent set or deformation under elevated temperatures, and the improved ability of the ceramic fibers to return to at least 85% to 90% of its original dimension

when a compression force is released (see Johnson et al., page 3, lines 47-59) would similarly improve the holding force of the support element **20** in the apparatus of Robinson et al., since the resiliency of the material would be maintained even under the "rigorous operating conditions" of the exhaust gas treatment device. It is noted that the ceramic fiber in Johnson et al. maintains its resiliency when used at temperatures below the devitrification temperature of the fiber material, i.e., a temperature of about 950 °C in the case of a 45% alumina and 52% silica fiber (see page 2, lines 32-51; page 3, lines 39-46). Robinson et al. (see, e.g., column 9, lines 32-40) further discloses that the "rigorous operating conditions" of exhaust gas treatment devices include temperatures of about 750 °C, which is well below the devitrification temperature of the fiber material.

Applicant also argues that from the previously submitted Declaration of Joseph A. Fernando, "the differences in thickness, density, shot content, the insulation blanket described in GB '133 simply would not provide the requisite holding pressure to maintain the fragile catalyst support structure in place within the housing of the exhaust gas treatment device during the rigorous operating conditions of the exhaust gas treatment device." However, this argument is not found persuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Please note that Johnson et al. was merely relied upon for its teaching of a heat treated ceramic fiber, and not the particular structure of the insulation blanket in which said fibers are to be ultimately used. Also,

the Examiner is not aware of any discussion of shot content within the disclosure of GB '133.

Lastly, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Leung whose telephone number is (571) 272-1449. The examiner can normally be reached on 9:30 am - 5:30 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer A. Leung
Art Unit 1764

jal
September 20, 2007